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AUTHOR Watson, Paula; Heim, Kathleen
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ABSTRACT

Intended to be a comprehensive analysis of the use of government documents at the University of Illinois at Urbana-Champaign (UIUC), this project was designed in particular to ascertain to what degree provision of full bibliographic control at UIUC facilitates documents use. A point-of-exit questionnaire was used to determine user status, department, how the document to be circulated was identified, and reasons for use. Due to the recent segregation of documents, the study was conducted on a small subset of UIUC's entire documents collection. An additional limitation involved the reliability of personnel administering the questionnaire. Analysis of the 150 usable responses received indicated that the majority of users were undergraduates; Congressional documents accounted for the greatest use; most undergraduate use of documents was related to coursework; and the provision of full bibliographic control for documents at UIUC had an observable impact on the sharing of documents resources. The study provided data for future research on the impact of the introduction of an online public catalog on documents use and patterns of access. A copy of the questionnaire is included in the appendices. (DMC)

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Federal Documents Use in the Research Library Setting

Report to the Council on Library Resources on work done under Professional Education and Training for Research Librarianship Program Grant #3007-D

Submitted by

Paula Watson
Assistant Director of General Services
University of Illinois Library
Urbana, Illinois

and

Kathleen Heim
Dean, School of Library and Information Science
Louisiana State University
Baton Rouge, Louisiana

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RATIONALE

The federal government is the nation's most prolific publisher. Even though only a fraction of the total federal publication output is received by libraries through the depository system, in FY 1983 the Government Printing Office reported that the Library Programs Service distributed approximately 30.4 million copies of more than 62,000 titles to depository libraries.[1] For those libraries which select a large percentage of available items the problem of bibliographic control is of major proportions.

Although the government issues access tools and commercial publishers supplement these with a variety of specialized indexes, librarians serving a research-oriented clientele have long pondered the provision of unified access to government materials. The fact that most libraries do not provide bibliographic records for depository items which are integrated with records for other library materials has led to a widespread underutilization of documents sources and to an insistence on the need for intensive instructional activities on the part of documents and reference librarians. Unified access from a central point of inquiry (a card catalog; an online catalog) could reduce the need for in-depth instruction on the organization of documents within libraries and on the intricacies of documents bibliography. It might also facilitate the progress of research at many institutions.

According to the 1981 Government Printing Office Biennial Survey of Depository Libraries, 67% of depositories maintain their documents in a separate collection and 71% employ the Superintendent of Documents classification for 75 to 100% of their holdings. Only about 6% of depositories catalog all their documents. Eight % catalog none of their

documents and 53% catalog fewer than 25%.[2] Although most libraries choose not to catalog most of their documents, the obvious question which persists for a library seeking to provide efficient access to the vast array of materials issued by the federal government is: can effective service be provided by reliance upon printed or online indexes or should documents be bibliographically controlled through the library's main catalog?

A large research library must make many decisions regarding the cost-effectiveness of its retrieval mechanisms. A government document collection which may account for a relatively small percentage[3] of the library's holdings can be easily organized outside of the central catalog through use of the Superintendent of Documents classification coupled with access to printed or online indexes. However, the degree to which this access is segregated may affect the nature and success of research conducted. Integrated access can be provided by dispersal of documents to their appropriate classified place in the collection or through centralized bibliographic control of a separate collection organized in Superintendent of Documents classification. Perhaps the best case for completely integrated access to government publications can be made at a large research library. Such a library is, after all, the only type of library that can be reasonably expected to contain a large portion of the material required for scholarly inquiry. With such an expectation it seems an obvious corollary that the material, once acquired, be made easily retrievable. Yet, because of the volume of yearly depository receipts, and the expense of cataloging them (intensified by the bibliographic complexities of documents) even large research libraries have opted to maintain uncontrolled collections purely for economic reasons.

An argument frequently advanced in favor of the separate uncataloged documents collection is that adequate access can be obtained through available indexes, in particular, the Monthly Catalog of U.S. Government Publications. In fact it has been shown that the knowledge and understanding of these tools is slight except on the part of a small percentage of users.[4]

The forces which drive decisions about documents disposition in a large research library are different from those which drive decision-making in regard to other types of research material. Because most documents are acquired without regard to actual cost and do not require complex acquisition procedures, there is no imperative to facilitate use in order to support continued purchase. If a book budget dwindles or a serials budget is cut, decisions are made about selection based on use. However, documents received through the depository system continue to arrive regardless of changes in the library's budget. Since the number of items received on deposit continues to increase, the decisions that must be made about documents maintenance and retrieval can only become more complex. The fundamental issues are clouded, however, because organization through the Superintendent of Documents classification to some degree mitigates access problems in uncataloged collections.

The rationale for studying the use of documents is clear. Given the relative absence of difficulties involved in acquisition, analyses of use are required in order to determine the level and extent of bibliographic control to be applied. User studies of documents are few and have little comparability. In 1980 several researchers noted that the question of documents use has barely been addressed.[5]

The project supported by the PETREL grant was intended to be a comprehensive analysis of the use of documents at the University of Illinois at Urbana-Champaign--a major research library. It was designed in particular to ascertain to what degree provision of full bibliographic control at UIUC facilitates documents use. The case study approach was used because of a number of factors about the case library which should allow generalizable observations to be made:

1) The library is one of the largest in the United States. It is the largest publicly supported university collection in the nation.

2) Research carried out by faculty at the University of Illinois is at a high level of excellence and sophistication. Illinois is a Carnegie Level I university.

3) The University of Illinois Library has always attempted to provide full cataloging for all depository documents except ephemera. Until 1980 federal government publications were classifed in Dewey and dispersed throughout a highly decentralized library system. In 1980 a major reorganization took place. A centralized documents collection classified using the Superintendent of Documents system was established. Documents continued to receive full cataloging. Brief bibliographic records for them continued to be added to LCS, the Library's online circulation system, and full cardsets continued to be filed into the Library's main catalog. The University of Illinois Library is thus one of the few major libraries in the country in which it is even possible to examine the relationship between bibliographic control and use.

4) Statistical packages associated with the LCS system also make it possible to generate data on who uses documents in a large research

library setting and which documents are most frequently used. Since LCS is a statewide system, the use data include off-campus as well as on-campus users. We can therefore make some observations on how the provision of cataloging at a lending institution effects the sharing of documents resources through existing networks.

5) The bibliographic control provided at Illinois by brief online bibliographic records and full cardsets in the main catalog will soon be enhanced by even more complete and flexible access provided through an online catalog system. Evaluation of the impact on use of full online access to documents records will be possible through comparison of the data collected in the present study with data to be collected after the online catalog is operational.

These factors make the UIUC Library an appropriate laboratory for a broad study of documents use. The investigators encountered a number of problems before the final report could be developed. Because the process of developing the project was, in part, one of the objectives of the funding agency the investigators have provided a summary of their interaction in Appendix I so as not to detract from the presentation of methodology, execution and findings.

REVIEW OF THE LITERATURE

Several publications have included literature reviews which summarize the status of user studies in documents. Terry Weech[6] examined and compared library surveys, citation studies, and user surveys concerned in whole or in part with government publications and identified four studies of federal documents in academic libraries all examining faculty use: McCaghy and Purcell's investigation of social science and humanities

faculty at Case Western Reserve University;[7] Wilson's at Trinity University;[8] McIlvaine's at the University of Connecticut;[9] and Hernon and Williams' at the University of Nebraska.[10]

Weech's discussion of these studies, which presents a tabular comparison of findings, includes the observation that "caution should be exercised in comparing the results of these studies since methodologies varied."[11] This sentiment is echoed about the same four studies by Hernon in the literature review for his study, Use of Government Publications by Social Scientists, as he notes, "extensive comparisons among these campuses are difficult given the difference in sampling procedures and questionnaire emphasis."[12] Hernon's study investigated the use of documents at seventeen academic depository libraries in Illinois, Indiana, Michigan, and Ohio by social scientists.[13] Questionnaires were sent to economics, history, political science, and sociology faculty and follow-up site interviews were conducted for a subset of the group surveyed by mail. An additional questionnaire was sent to the individual in charge of documents at each institution.

However, the studies identified have all focused on faculty use. Weech identifies only one study, a master's thesis conducted in 1956, that gathered data on all users of an academic library.[14] He also points out that he could find no other studies "that would provide evidence of the importance of subject access through the card catalog to all library users--perhaps because so few libraries catalog documents.[15] Weech asserts that more research in this area is badly needed. He calls for further study of student and non-faculty use and for examination of the relationship between user status and patterns of access.[16]

Given the dearth of base-line data about the general use of federal government publications in an academic library the investigators sought to examine total use for an intensive period. The opportunity provided by the PETREL program appears to be the first time that an individual in-charge of an academic depository collection and a faculty member at a school of library and information science education have cooperated to investigate documents use.

DOCUMENTS AT THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN LIBRARY

Restructuring of the documents function at Illinois was motivated by a number of internal organizational factors and facilitated by several external developments. Reconsideration of arrangements for documents was precipitated in 1978 by a general reorganization of Technical Services along functional lines. Federal documents had been processed by the Documents Division of the Serials Department until 1978 when that department ceased to exist. A committee of librarians was appointed to recommend a new plan for the handling of documents. Their report recommended the creation of a new documents unit to combine the public and technical services functions associated with documents. It was agreed that the federal depository collection could be largely centralized and classified using the Superintendent of Documents Classification scheme. All new monographs and serial titles received after December, 1979 were to be located in the main Library bookstacks. It was agreed that live depository series then located in the branches would continue to be sent to these locations at least for the forseeable future. Reference service was to be provided from a core reference collection and office area located at one end of the large main Library reference room.

In 1978 LCS, UIUC's online circulation system, became operational. Although the records in the circulation system are not full catalog records, LCS does serve a limited union catalog function, providing information on total system holdings to all branch locations. The existence of LCS made it possible to establish a centralized federal documents collection whose holdings could be known to and, easily circulated from, the branches. The existing LCS system will soon be enhanced by the addition of an online catalog component providing complete and far more flexible access to holdings information. Illinois has had a long tradition of providing full cataloging for documents. Also, the provision of records in the online system, which would be searchable from terminals in the departmental libraries, seemed essential to the acceptance of a centralized documents collection in a library where documents had formerly been fully integrated into the collections. For these reasons, proposals for the creation of a central depository collection had to include plans for cataloging the materials.

The external factors which influenced plans for establishing a fully cataloged central documents collection included the following. In 1976 the Government Printing Office began to add its cataloging to the OCLC database. In late 1980 GPO became the national authority for descriptive cataloging of federal documents. An unpublished study done at the Illinois State Library in December 1979 indicated that cataloging for 84% of federal documents could be found in the OCLC database within approximately eight weeks of the date of shipment. The same study indicated that 53% of the cataloging found was input by the Government Printing Office.[17] Based on this study and on moves to strengthen GPO's

position as the national documents cataloging authority, Illinois expected to see more and better (i.e., more standardized) records being input faster to OCLC by GPO. The decision was therefore made to integrate documents into the existing technical processing work-flow. Approximately 85% of library materials are cataloged at Illinois via OCLC. It was decided that records for the Illinois catalog and database would be produced through the use of largely unedited records in the OCLC database. Illinois currently catalogs about 70% of depository receipts within about ten weeks of their shipment date. The rest are cataloged as copy becomes available. Most of the cataloging used is GPO cataloging. On the order of 20% is contributed to OCLC by other institutions, but this cataloging has been found generally to be of reasonably high quality.[18] While some documents remain uncataloged for varying periods of time, records for most high-use items appear in the main Library catalog and in the online system within a relatively short period of time.

METHODOLOGY

The creation of a separate documents shelving area in the closed stacks provided the mechanism to identify documents users at point-of-exit. The investigators developed a simple questionnaire to determine user status, department, how the document to be circulated was identified, and reasons for use. Robinson has observed that "the circulation desk is the natural place to solicit and capture information about the ability of the collection to meet user needs since there is an opportunity to contact nearly all users at a time when they have just used the collection."[19] Most previous documents use studies have relied on questionnaires which require the user to remember how often and why he used

documents long after he has used them. Such techniques lack the immediacy of the methodology employed here and the potential the point-of-circulation questionnaire provides for capturing accurate data on user behavior in relation to documents.

Limitations

Due to the recent segregation of documents the study was conducted on a small subset of the University's entire documents collection, namely:

1) Documents received and processed after December, 1979 to date.
2) Documents sent to the stacks rather than to other deparmental libraries. It is estimated that 12.5% of currently received depository series are still going to the departmental libraries. Departmental libraries also may duplicate items in the central SUDOCS collection. Presumably those duplicated are expected to receive high use.
3) Documents actually charged out for use. Documents used but not charged were not analyzed.
4) Documents in print format. Although a high percentage of the total collection is in fiche format and microfiche documents have been cataloged since 1981, they are located in the Documents Library (in the reference area) and not in the main Library bookstacks. Also present limitations of the LCS statistical package made it impossible to tabulate circulation of documents which are fiche.

In addition to limits on the actual documents studied, there was an additional factor which caused difficulty: reliability of personnel administering the questionnaire.

Questionnaire Development

The questionnaire used for the point-of-exit survey went through several iterations. The final version (see Appendix II) was developed in order to derive the key information desired in the simplest manner. The need for more complex information had to be weighed against the logistics of administering the questionnaire. The questionnaire was pre-tested with a number of identified documents users (faculty and students from the Graduate School of Library and Information Science.)

The questionnaire was then presented to the Central Circulation Librarian, the Circulation Manager, the graduate assistants and the non-academic staff. These individuals (some of whom work themselves at the Circulation Desk and also supervise the exit personnel who would administer the questionnaire) perused the questionnaire for simplicity in administering. Based on their suggestions another revision was made. The group met again and approved the final version. It was decided that completed questionnaires would be collected in three clearly marked and brightly colored yellow boxes: two on the main circulation desk and one at the closed stack exit point. A mail-back option was also provided.

The questionnaire included two sets of information. The first, simple demographic data, requested status through a forced choice set of options. Room was left for "other" but most anticipated categories (as identified by the Circulation supervisors) were included. Categories used were: faculty; Ph.D. student; M.A., M.S. or other type of graduate student; undergraduate (with the option to specify whether lower division or upper division and, if the latter, to specify the major); academic or nonacademic staff; permit holder with specification option; visiting

scholar; and other. Departmental affiliation was requested and whether or not the use was surrogate or actually for the person filling out the questionnaire.

For each item checked out another set of forced choice options were provided. The call number of the document was the first piece of information. The second was method of identification of the item. Options provided were: librarian; another person (faculty, employer, co-worker, teacher, other); citation (in book, journal, newspaper, dissertation or thesis, technical report); computerized literature search (specification requested); citation in an index (specification requested); library catalog under subject; browsing; searching LCS; other (specification requested). Contact information was also requested for a possible follow-up interview.

Conduct of the Survey

The survey period began on March 1, 1983. Circulation personnel instructed their staff to provide users of documents with one questionnaire for every two documents circulated. (The two-sided questionnaire allowed users to provide full data sets for two documents. If users were circulating more than two documents at one time, staff were instructed to provide them with additional forms.) They were then to instruct those surveyed to drop the questionnaire into the yellow drop box or to mail back the questionnaire. After one week the large number of returns from the undergraduates using documents in relation to course projects indicated that we would need specific data on courses, since they were frequently not in the major field of study. A revision of the questionnaire was made requesting that the respondent specify the course number when the document was being checked out in connection with a class paper.

The study ended on May 15, 1983. The time period covered was from what is normally the busiest time of the spring semester in the Library (5 weeks into the term) until the end of the semester. At that time completed questionnaires were tabulated and a codebook developed for analysis of the responses (see Appendix III for codebook). The SPSS program was used to generate frequencies and cross-tabulations.

Response Size

The usable responses totalled 150. In spite of efforts to train circulation personnel to provide the questionnaire to all documents users the returned questionnaires seem to represent, in the main, those undergraduates who were not allowed access to the closed stack documents area and who filled out the questionnaire while waiting for documents to be paged. The results of Phase II of the project, described below, support this assumption.

Some speculations may be advanced concerning this bias in the sample. Circulation staff may have found it intimidating to request faculty to fill out the questionnaire. Faculty and graduate students may have been less receptive to responding than undergraduates who could pass the time while waiting for their documents to be paged by filling out the questionnaire. Only a very few questionnaires were turned in at the drop box located at the closed stack exit point, the most likely place for graduate students and faculty to be checking out materials. Workload at the Circulation Desk would clearly have been a major factor. At busy times staff might forget or simply not wish to take the time to hand out the survey. The staff asked to collect the data numbered at

least 26. Totally reliable performance from such a large group of personnel over a two and one half month period of time is perhaps an unreasonable expectation.

Total Documents Circulation

Phase II of the study was conducted after the questionnaire distribution period. However, since the results support and amplify the questionnaire findings, the two will be discussed together. Phase II measured total documents circulation for the period by status of user and was obtained by use of STAT 18D, a program in the LCS circulation statistics package. The STAT 14 program was also run as a part of Phase II. STAT 14 counts holdings by call number range and allows us to ascertain whether use of various classes of documents is related to their numbers in the collection. Appendix IV further details the functions of STAT 14 and STAT 18D.

FINDINGS

Findings are reported with a comparison of the questionnaire results and total circulation where appropriate. Robinson has noted that a focus on past use rather than on the documents collection itself is an important predictor of future use.[20]

Status

The majority of users (both in the total and for the questionnaire sample) were undergraduates. (See Table 1) The questionnaire sample identified a higher percentage of use than the total sample but the rankings for both sets of data are consistent. Based on the survey period total circulation figures, undergraduates and graduate students use documents more or less in proportion to their numbers in the campus

TABLE 1. Status of documents users

	Questionnaire (N)	(%)	Total Use* (N)	(%)	Average University Population, 1982[2] (N)	(%)
Undergraduates	111	73.5	760	60.2	26,307	63.3
Graduates	27	17.9	266	21.1	8,607	20.7
Ph.D.	(13)	(8.6)				
Other	(14)	(9.3)				
Faculty	9	6.0	116	9.2	6,659	16.0
(Visiting Scholars	(2)					
Academic staff	(1)					
IR&R[1]			85	6.7		
Special (includes to reserves and permit holders)	2		35	2.7		
Non-Academic Staff[2]	1					
No Response	1					
Totals	151	100.1**	1262	99.9**		

*These statistics were gathered by use of the STAT 18D program of the LCS statistical package. The program counts renewals and circulations together, making it difficult to obtain reliable data on actual use. So as not to over--estimate use greatly, we can count only one circulation for each type of borrower for each document, i.e., when the statistical report indicates that a particular item circulated seven times to a faculty member, since we cannot tell if it circulated seven times to seven different users or once to the same user who renewed it six times, we count only one use. Hence, the numbers in the table represent a minimum total of circulations. We are no doubt under-estimating total use, but probably not misrepresenting too much relative use by different categories of users. (However, it is true that certain categories of users may be more likely to renew books than others. Undergraduates have shorter loan periods, for example, and may be more likely to renew). The figures presented on the table also underestimate total use in another way since they measure only circulation via the online system. Documents which have never been cataloged circulate manually and these circulations are not counted. We estimate that approximately 7 percent of all documents circulation is manual. Also, owing to a system limitation, the circulation of documents in micofiche could not be included in the total use figures.

**Rounding errors.

[1]Illinois Reference and Research Center. This unit is responsible for inter-library lending particularly through the ILLINET multitype library network, but also to institutions in other parts of the country. Survey data were not collected via questionnaire for items sent out on interlibrary loan. Data on the means for identifying documents to be borrowed were collected, however, and are presented elsewhere in this report.

[2]University population figures are taken from the University of Illinois Office of Public Affairs 1983-84 Reference Folder. Circulation to non-academic staff is counted as undergraduate borrowing by the LCS statistical package and so does not appear separately in the report of total use. Non-academic staff were dropped out entirely in the calculation of the percentage of the total campus population represented by the various user groups on this table. If non-academic staff were included in the total campus pool of users the percentage of the total population with undergraduate borrowing privileges would be 67%. It does not seem likely that the non-academic staff accounts for much of the recorded documents use. Similarly figures presented for numbers of faculty on campus also include both administrative staff and academic professionals. Borrowing by these users is also recorded by LCS as faculty borrowing.

user population, while faculty members may use them less than might be expected in relation to their number in the potential user pool. (however, see footnote 2 to Table 1.) Reasons for the higher percentage of undergraduates in the questionnaire sample are most likely due to the circulation staff's failure to distribute the questionnaire. However, given the similarity of rankings of the two sets of results, examination of the majors and departments of users (data obtained only from the questionnaire) does allow us to make generalizations about the kinds of individuals using documents.

Tables 2 and Table 3 identify use by major for undergraduates and by department for faculty and graduate students. Perhaps the most salient observation which can be made about majors and departmental affiliations is that there is no clear pattern.

Classes of Documents Used

Previous studies of documents use have not gathered data refined to the issuing agency level. Such data would be of great use in planning bibliographic instruction and current awareness services, making storage and binding decisions, and targeting portions of the collection for easy access. Both the total and questionnaire sample identified use by class and then broke this down by status of user. Table 4 presents circulation activity by SUDOCS class number for the three largest categories of borrowers: undergraduate, graduate, and faculty. The remaining categories are collapsed into "other."

As is shown by Table 4, Congressional documents (including council and commission reports) accounted for the greatest use in both sets of data: 42.7% of the total circulation and 52.95% of the questionnaire

Table 2. Majors of undergraduate documents users

	(N)	(%)
Mechanical Engineering	11	11.1
Liberal Arts and Sciences*	9	9.1
Bioengineering	9	9.1
Political Science	9	9.1
Business Administration	8	8.1
Economics	7	7.1
Accounting	4	4.0
Nuclear Engineering	4	4.0
Agriculture	3	3.0
Communication	2	2.0
Chemistry	2	2.0
Finance	2	2.0
Interior Design	2	2.0
Social Work	2	2.0
Speech	2	2.0
Architecture	1	1.0
Biology	1	1.0
Biochemistry	1	1.0
Biophysics	1	1.0
Marketing	1	1.0
Recreation	1	1.0
Health Education	1	1.0
Urban Planning	1	1.0
Industrial Design	1	1.0
No Response	16	16.2
	99	99.8

*Lower division, major not yet chosen

Table 3. Departmental affiliations of faculty, staff and graduate student documents users

	(N)	%
Accounting	7	24.1
Political Science	3	10.3
Urban Planning	3	10.3
Agricultural Engineering	2	6.9
Education	2	6.9
Communication Research Institute	1	3.4
Psychology	1	3.4
Human Development	1	3.4
Health Education	1	3.4
Illinois State Water Survey	1	3.4
Food Science	1	3.4
Labor and Industrial Relations	1	3.4
Landscape Architecture	1	3.4
Library Science	1	3.4
Geography	1	3.4
No response	2	6.9
	29	99.4

Table 4. Circulation by Superintendent of Documents class, user status, and in relation to class percentage of holdings

	All Circulation[1]						Questionnaire Sample						
SuDoc Class	Under Grad	Grad	Faculty	Other	Total for this class	Percent of Absolute Total	Under Grad	Grad	Faculty	Other	Total for this class	Percent of Absolute Total	% of Total Documents Print Holdings Represented by this Class
A	15	14	5	9	43	3.41	4	2	1	1	8	5.29	4.40
AA	0	0	0	0	0	0.0	0	0	0	0	0	0.0	0.10
AC	2	0	0	0	2	0.16	0	0	0	0	0	0.0	0.04
C	14	23	7	2	46	3.64	3	4	0	0	7	4.63	4.90
CAB	2	0	0	0	2	0.16	0	0	0	0	0	0.0	0.50
CC	0	0	0	0	0	0.0	0	0	0	0	0	0.0	0.10
CR	0	0	0	0	0	0.0	2	0	0	0	2	1.32	0.60
CS	0	0	0	0	0	0.0	0	0	0	0	0	0.0	0.04
CSA	0	1	0	2	3	0.24	0	0	0	0	0	0.0	0.10
D	36	9	3	12	60	4.75	6	0	0	0	6	3.97	3.80
E	43	14	3	8	68	5.38	7	0	0	0	7	4.63	4.70
ED	15	3	1	3	22	1.74	0	0	0	0	0	0.0	1.10
EP	16	11	1	1	29	2.29	1	0	1	0	2	1.32	7.50
FEM	2	0	1	0	3	0.24	2	0	0	0	2	1.32	.30
FP	0	0	0	0	0	0.0	0	0	0	0	0	0.0	0.02
FT	4	0	0	0	4	0.32	1	0	0	0	0	0.66	0.20
GA	1	0	0	1	2	0.16	1	1	0	0	2	1.32	0.40
GP	0	0	0	1	1	0.08	0	0	0	0	0	0.0	0.10

SuDoc Class	All Circulation[1] Under Grad	Grad	Faculty	Other	Total for this class	Percent of Absolute Total	Questionnaire Sample Under Grad	Grad	Faculty	Other	Total for this class	Percent of Absolute Total	% of Total Document Print Holdings Represent by this Class
GS	0	0	2	1	3	0.24	0	0	0	0	0	0.0	0.40
HE	106	45	27	25	203	16.08	11	0	1	1	13	8.6	9.70
HH	10	7	3	0	20	1.58	0	0	0	0	0	0.0	1.00
I	18	6	3	1	28	2.21	1	0	1	0	2	1.32	4.40
IC	0	0	0	0	0	0.0	0	0	0	0	0	0.0	.10
ICA	0	0	0	0	0	0.0	0	0	0	0	0	0.0	0.0[2]
J	28	4	5	5	42	3.32	3	0	0	0	3	1.98	2.60
JU	0	6	1	0	7	0.55	0	0	0	0	0	0.0	0.30
L	13	5	4	2	24	1.9	1	0	0	0	1	0.66	1.40
LC	0	0	0	2	2	0.16	0	0	0	0	0	0.0	0.60
MS	1	0	0	0	1	0.08	0	0	0	0	0	0.0	0.0[2]
NAS	8	1	0	0	9	0.71	1	0	0	0	1	0.66	0.5
NF	0	0	0	1	1	0.08	0	0	0	0	0	0.0	0.2
NS	0	4	0	1	4	0.32	0	0	0	0	0	0.0	0.3
P	0	0	0	0	0	0.0	0	0	0	0	0	0.0	0.1
PM	2	0	0	0	2	0.16	0	0	0	0	0	0.0	0.4
PR	5	0	1	1	7	0.55	2	0	0	1	3	1.98	0.5
PREX	8	3	1	1	13	1.03	1	0	0	0	1	0.66	0.7

SuDoc Class	All Circulation [1] Under Grad	Grad	Faculty	Other	Total for this class	Percent of Absolute Total	Questionnaire Sample Under Grad	Grad	Faculty	Other	Total for this class	Percent of Absolute Total	% of Total Documents Print Holdings Represented by this Class
S	11	0	5	0	16	1.26	0	0	0	0	0	0.0	1.1
SBA	1	6	8	1	16	1.26	0	0	0	0	0	0.0	0.3
SI	0	0	1	0	1	0.08	0	0	0	0	0	0.0	0.4
T	4	1	1	0	6	0.47	0	1	0	0	1	0.66	0.4
TD	23	1	1	4	29	2.29	0	0	0	0	0	0.0	4.0
VA	4	0	0	0	4	0.32	0	0	0	0	0	0.0	0.2
Y1. and Y10	12	4	0	1	17	1.34	1	3	0	0	4	2.64	0.9
Y3.	65	21	9	7	102	8.08	4	4	1	1	10	6.62	7.8
Y4.	291	77	23	29	420	33.28	54	9	0	3	66	43.71	32.1
Other Classes	0	0	0	0	0	0.0	5	3	1	0	9	5.96	.1
Total	760	266	116	120	1262	99.9	111	27	6	7	151	99.9	99.5

[1] See footnote 2 to Table I

[2] Holdings amount to less than .01% of the total collection

sample. These were followed by publications from Health and Human Services. Table 5 shows the top ranking categories for each sample. In both samples publications issued by Congress, Health and Human Services, Energy, Agriculture, Defense, and Commerce accounted for the majority of use.

Because the hearings of Congress accounted for such a large percentage of total use this class is broken down by Committee in Table 6.

Table 4 also presents data derived from a run of the STAT 14 program of the LCS statistical package on the percentage of the total collection represented by the publications of the different agencies (i.e., by agency classification). What is most interesting about this display is that it makes evident that, with a few exceptions, the publications of the various agencies circulated during the survey period in almost direct proportion to their numbers in the collection. In some cases the relationship between circulation and holdings is almost startlingly exact. At first observation, these findings would seem at the very least to validate the selection policies at the University of Illinois for depository documents. However, Illinois is a 90 to 95% depository and fails to select only government documents which are clearly ephemeral (e.g., posters, meetings announcements, promotional flyers, etc.) and those which are obviously not of any research value. These findings therefore tell us something about the use of documents in the academic research setting generally. It is usually assumed that libraries select large numbers of documents which molder on the shelves unused and that only a few categories of documents serve any useful function. These data appear to belie these assumptions. While it is true that in the 3-month

Table 5. Agency publications ranked by frequency of use

	All Circulation		Questionnaire Sample		
1	Y4	33.28%	1	Y4	43.71%
2	HE	16.08	2	HE	8.6
3	Y3	8.08	3	Y3	6.62
4	E	5.38	4	A	5.29
5	D	4.75	5	E	4.63
6	C	3.64	6	C	4.63
7	A	3.41	7	D	3.97
8	J	3.32	8	Y1;Y10	2.64

Table 6. Total use of the publications of Congressional committees during the survey period ranked by frequency use

SuDocs Class	Congresssional Committee	Use
Y4.F 76/1	(House Commitee on Foreign Affairs)	51
Y4.F 76/2	(Senate Committee on Foreign Relations)	34
Y4.SCI 2	(House Committee on Science and Technology)	32
Y4.EC 7	(Joint Economic Committee)	30
Y4.W 36	(House Committee on Ways and Means)	24
Y4.L 11/4	(Senate Committee on Labor and Human Resources)	22
Y4.AG 4	(Special Committee on Aging)	22
Y4.G 74/9	(Senate Committee on Governmental Affairs)	22
Y4.ED 8/1	(House Committee on Education and Labor)	17
Y4.J 89/1	(House Committee on the Judiciary)	15
Y4.IN 8/4	(House Committee on Interstate and Foreign Commerce)	14
Y4.B 22/1	(House Committee on Banking, Finance and Urban Affairs)	11
Y4.IN 8/14	(House Committee on Interior and Insular Affairs)	11
Y4.AP 6/2	(Senate Committee on Appropriations)	10
Y4.G 74/7	(House Committee on Government Operations)	10
Y4.J 89/2	(Senate Committee on Judiciary)	10
Y4.V 64/4	(Senate Committee on Veterans' Affairs)	10
Y4.F 49	(Senate Committee on Finance)	8
Y4.AG 8/3	(Senate Committee on Agriculture, Nutrition and Forestry)	6
Y4.AR 5/3	(Senate Committee on Armed Services)	6
Y4.C 73/7	(Senate Committee on Commerce, Science and Transportation)	6
Y4.P 96/10	(Senate Committee on Environment and Public Works)	6
Y4.P 84/10	(House Committee on Post Office and Civil Service)	6
Y4.B 85/2	(House Committee on Budget)	4
Y4.B 85/3	(Senate Committee on Budget)	4
Y4.SM 1/2	(Senate Committee on Small Business)	4
Y4.AG 8/1	(House Committee on Agriculture)	3
Y4.AP 6/2	(Senate Committee on Appropriations)	3
Y4.AR 5/2	(House Committee on Armed Services)	3

Y4.B 22/3	(Senate Committee on Banking, Finance and Urban Affairs)	3
Y4.IN 8/18	(House Committee on Intelligence)	2
Y4.L 11/2	(Senate Labor and Public Welfare Committee)	2
Y4.M 53	(House Committee on Merchant Marine and Fisheries)	2
Y4.P 96/11	(House Committee on Public Works and Transportation)	2
Y4.SM 1	(House Committee on Small Business)	2
Y4.V 64/3	(House Committee on Veterans' Affairs)	2
Y4.D 63/1	(House Committee on District of Columbia)	1
Y4.EN 2	(Senate Energy and Natural Resources Committee)	1
Y4.IN 2/10	(American Indian Policy Review Commission)	1
Y4.IN 2/11	(Senate Select Committee on Indian Affairs)	1
Y4.IN 8/16	(House Committee on International Relations)	1
Y4.L 61/2	(Joint Committee on the Library)	1
Y4.T 19/4	(Joint Committee on Taxation)	1
		426

study period approximately 33% of the total circulation is accounted for by Congressional hearings and committee prints, it is also true that these publications comprise 32% of the existing collection and that the rest of the circulation is spread more or less evenly over the rest of the classes in relation to their numbers.

The publications of the Department of Health and Human Services circulated by almost a factor of two more than in proportion to their numbers and have a higher incidence of faculty and graduate student use than other classes. There is also a higher than average graduate student and faculty use found for the publications of the Department of Housing and Urban Development. The Documents Library at Illinois has experimented with current awareness services to two faculties which might find SUDOCS class HE and HH documents to be of interest; namely, faculty in the School of Social Work and faculty in the Department of Urban and Regional Planning. Three lists arranged under topical headings and derived from the short records in the LCS circulation system were generated in 1982 and distributed to the faculty in these two departments. Response from the planners was generally enthusiastic (based on a follow-up questionnaire); response from the social workers was mixed. By examining the circulation data collected for this study we found that 50% of the documents on two of the lists circulated during the year following their appearance on the list. These observations of the circulation of listed documents taken together with the recorded survey period total circulation data suggest that expansion and refinement of these particular current awareness services at UIUC is indicated and that faculty in these disciplines may be appropriate targets for such services at other institutions.[21]

With regard to the provision of bibliographic control, it would seem that there is no substantial basis for distinction among the classes of documents. It might be argued that Y4's should receive top priority where choices have to be made. They are certainly given such priority by GPO. On the other hand they have better indexing available (through the Congressional Information Service Index to the Publications of the United States Congress) than any other single class of federal publications. The only sensible approach, since use is so evenly distributed over the collection, is to catalog all documents or to catalog them in order of their numbers in the collection, beginning with the most numerous Y4's, going on to the HE's and so on.

Reasons for Using Documents

Most undergraduate use of documents was found to be related to coursework. Over 80% of all use can be accounted for in this category. Table 7 shows undergraduate use by major or college. Most courses identified were rhetoric, speech communications, and geography. Other courses such as history, economics, and political science were cited occasionally. The high use in connection with rhetoric and speech communications may simply be attributable to the fact that several thousand freshmen take these courses each semester and the writing of a term paper or the preparation of a speech requiring several basic references on a given topic is a major assignment whose due date fell during the time frame of the survey. Students in these courses also typically receive instruction through the University of Illinois Undergraduate Library's Research Skills Instruction Program. This program makes a point of introducing students to government publications as potential information sources for their papers.

Table 7. Major or college of undergraduate documents users and reason for use

Undergraduate Major or College	Specified Course	Unspecified Course	Use by Another	Recreation	No Response	Total
Mechanical Engineering	3	7			1	11
Bioengineering	5	4				9
Political Science	5	3				8
Liberal Arts & Sciences	1	5			2	8
Business Administration	7	1				8
Economics	3	2		2		7
Accounting	2	1				4
Nuclear Engineering	2			2		4
Agriculture	1	1	1			3
Communication	2					2
Chemistry		1			1	2
Finance	2					2
Interior Design	2					2
Social Work	1	1				2
Speech					2	2
Other (no or no response)	11	6	5	1		
TOTAL	47(48.5%)	32(33%)	6(6.2%)	5(5.2%)	6(6.2%)	97

Use of documents by graduate students and faculty was widely scattered. Nearly half of the graduate students used documents for thesis related research and most faculty used them for original research. Only one use was recorded for course development.

Identification of Documents

Table 8 shows how undergraduates identified the documents they circulated. Approximately 22% identified a document as being of value to them through the intercession of a librarian, i.e., by asking for information on a particular topic and discovering a document of relevance through the reference interview process. Another 25.5% located documents of interest through indexes, including for example, the Monthly Catalog of U.S. Government Publications, the Congressional Information Service Index to the Publications of the United States Congress, the American Statistics Index and Public Affairs Information Service Bulletin. PAIS was the index most frequently cited by the undergraduates responding to this section of the questionnaire. Since PAIS does not provide the Superintendent of Documents classification number in its entries, in libraries where documents are maintained in a separate uncataloged, SUDOCS-ordered, collection, finding a particular document identified through this index would require resorting to yet another index, either the Monthly Catalog or the Publications Reference File. Only a few undergraduates appear to have been looking for known items, either identified to them by others or cited in a journal article.

A quite large percentage of undergraduates, however, were able to identify documents for use because the Library had provided a bibliographic record for the item which was integrated with the records for

Table 8. Means used by undergraduates to identify relevant documents

	(N)	(%)
Index	25	25.5
Subject Catalog	24	24.5
Asked Librarian	22	22.4
LCS	14	14.3
Faculty Referral	4	4.1
Journal Citation	2	2
Computerized Literature Searach	2	2
Told by Others (non-faculty)	2	2
Citation in Book	1	1
Technical Report	1	1
Unspecified	1	1
	98	100

other types of library materials. About 25% of documents circulated were identified in the "library catalog under subject." This is a respectably high figure and is given even more weight by the fact that, as a by-product of preparation for the implementation of an online catalog, the UIUC Library was at the time of the survey at least one year behind in filing cards into the main card catalog. Assuming that documents of the most recent date would have been even more attractive to undergraduate users working on timely term paper topics, the percentage of documents found by subject in the card catalog might have been even higher had the filing been up-to-date. In addition to the 24.5% found by subject in the traditional card catalog, another 14.3% were "found while searching LCS for another title." LCS, the Library's online circulation system, does not permit searching by subject, but many items are identified for use serendipitously, usually when the user is employing a title search which, either intentionally or unintentionally, becomes a subject search.[22] If we take the documents identified by subject in the card catalog together with the documents identified while searching for another title by using the brief records in the online circulation system, we find that close to 40% of all documents were circulated to undergraduates because the University of Illinois Library provides the same level of bibliographic control to federal depository publications as is provided to all other library materials. It seems fair to assume that 40% of the documents circulated during the survey period might not have been used had they not been cataloged.

As might be expected, the provision of full bibliographic control for documents at Illinois has an observable impact on the sharing of documents resources. The UIUC interlibrary lending unit, the Illinois

Reference and Research Center, (see also Table 1) is responsible for lending both within Illinois (via ILLINET, the state's multitype library network) and outside the state. The unit maintains statistics on a number of variables associated with the process, including the channel via which the borrowing request was received. We were able to obtain one month's worth of data on interlibrary lending transactions during the survey period for the present study. These data indicate that the bibliographic records Illinois creates for depository documents (which are available to other libraries through online systems) greatly facilitate the sharing of documents materials with both Illinois and non-Illinois institutions. In the month for which data were available, we found that 90% of the requests for documents were received either via the LCS statewide system or via the OCLC interlibrary loan subsystem.

Graduate students and faculty, as illustrated in Table 9, show a broader range of finding techniques than the undergraduate population, rely less on the subject approach to the card catalog, and are much more frequently looking for known items. Since faculty and graduate students have access to the closed stack area in which the documents are housed, browsing is also cited by this group as a means of identification.

CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The findings of this study, while in no way definitive, do shed some light on issues which recur in the literature of documents librarianship. It is frequently asserted that documents are a little-used class of materials. Illinois circulation data indicate that documents circulate with more frequency in relation to their numbers than do other stacks materials. In 1982/83 the ratio of general stacks circulation

Table 9. Means used by faculty and graduate student to identify relevant documents

	(N)	(%)
Journal Citation	5	17.2
Subject Catalog	4	13.8
Asked Librarian	3	10.3
Faculty referral	3	10.3
Citation in Book	3	10.3
Index	3	10.3
Browsing	3	10.3
Newspaper Citation	2	6.8
Thesis Citation	1	3.4
Other	2	6.8
	29	99.5

(including renewals) to the number of volumes in the stacks collection was approximately 12% while the same ratio for documents was 22%. This is perhaps a misleading comparison since materials in the general stacks collection include volumes of considerable age, whereas the document collection contains titles which are no more than five years old. If we compare documents collection circulation with branch library circulation the results are less favorable. This comparison misleads in a different way, since branch libraries are designed to contain the core high-use literature in a particular subject field and are usually located in close proximity to a specilized clientele, a factor which encourages intensive use. For many branches the ratio of circulation to volumes in the collection is around 100%. Some branches have ratios as low as 20, 52 and 64%. While there are many variables that have not been taken into account in the presentation of these figures, it seems fair to say, based on these data, that the use of documents as a class of materials is not drastically out of line with the use of other research library materials.

It has also been argued that only a few documents series are likely to account for most of the use in depositories. Hernon has urged that depositories (partial depositories in particular, but also those in research libraries) work towards building truly "functional" collections. He suggests that most of the needs of the majority of users might be satisfied by a fairly limited, selected group of core titles in various subject areas and that libraries ought to rely on interinstitutional cooperation to meet remaining demands.[23] Our findings seem to indicate that the identification of the functional core documents collection for

a research library may not be an easy matter. Since we find that the documents of the various federal agencies circulate in fairly direct proportion to their numbers in the collection, a more detailed analysis of title-by-title circulation is required before any suggestions can be made concerning the depository series with the highest probability of use in the research library setting.

Our findings concerning the importance of providing full bibliographic records for documents which are integrated with the bibliographic records for other library materials corroborate the results of an earlier circulation-based documents use study. In an unpublished master's thesis, DeVelbiss[24] reports the results of the documents portion of a much larger project carried out at the University of California-Berkeley concerning the provision of subject access to library materials. DeVelbiss' object was to identify categories of documents which would be sought by users by title or by issuing agency so that subject cataloging being done for such titles could be eliminated. In studying items which circulated during a given period, DeVelbiss found subject access to documents in the main card catalog to be particularly important to undergraduates. Her sample of undergraduate users identified two-thirds of the documents they checked out by subject in the card catalog. Based on additional data regarding methods used to identify other materials in the collection for use, DeVelbiss also concluded that subject access is relatively more important to documents users than it is to the users of other library resources. While the collection of this kind of comparative data was beyond the scope of this project, further research on this question would certainly be useful in justifying the expenditure required to provide full cataloging to documents in academic

library depositories. On a large university campus such as Berkeley's or Illinois', undergraduates are the most numerous class of users. Since it is well known that undergraduates frequently use the subject approach in the card catalog to satisfy their information needs, it may not be particularly surprising that, in a collection where documents are cataloged, undergraduates often identify the documents they use by subject. In libraries with large undergraduate populations it seems clear that the provision of subject access will maximize the use of documents by the largest segment of the user population.

Our findings point to the value of cataloging documents and they also provide some indication as to priorities if cataloging of the entire collection is not possible. The circulation data we collected (and documents reference experience) imply that first priority should probably be given to the cataloging of Congressional documents. Beyond that, it would seem sensible to choose the publications of the agencies most heavily represented in the collection.

The present study has examined documents use in a major research library during a period of transition both with regard to the handling of documents themselves and with regard to the provision of bibliographic control to general library materials. While documents have always been cataloged at the University of Illinois, they have been housed in a separate collection arranged by the Superintendent of Documents classification only since 1980. Before that time it would have been impossible to investigate patterns of use and patterns in the means users employ to identify documents for use as we have done in this project. Without the statistical capabilities of the online circulation system data

packages, it would have been considerably more difficult to identify the types of patrons using documents and the categories of documents used. Since the University of Illinois is on the point of implementing an online public access catalog which will contain full bibliographic records for all items cataloged since 1975, it seems likely that the usage patterns for all library materials, including documents, will change. The findings of this study support Illinois' current policy of cataloging essentially all documents. An obvious extension of this project would be a replication to be undertaken once the online catalog is fully operational.

Once the online catalog is in place, it seems probable that the general use of the Library's collection (including documents) will increase. The increase in use will be the result of fuller and far more flexible access to Library holdings information from even remote locations. In the particular case of Illinois, increased use due to the existence of an online catalog will be further encouraged by the provision of a user-friendly interface on most system terminals. The interface will not only walk users through a search by author, title, or subject, it will also instruct them in how to charge books out while sitting at the terminal. Thus users in branch libraries who identify documents of interest to them will, through a series of simple commands, be encouraged by the interface to charge them out from the central SUDOCS collection and have them mailed to a campus address. Access to government publications in particular will be increased by the keyword corporate author and keyword title searching made possible by the online catalog.

Recent reports on online catalog use indicate that the search most frequently employed is by subject. Since we have found that the subject approach is a common means for locating documents it seems likely that the provision of online subject access to documents should have an observable impact on documents use. The present study provides benchmark data for future research on the impact of the introduction of an online public catalog on documents use and patterns of access. It seems likely that a future study will show that a much higher percentage of documents are identified for use by means of the online full bibliographic record system than are presently identified through the brief records now available through LCS, the existing online circulation system.

It was hoped that this study would examine broad patterns of user behavior in relation to the identification of documents for use. Regrettably we were able to collect only a very small amount of data for user populations other than undergraduates. The interrogation of users by means of a questionnaire at the point of circulation permits obtaining the maximum amount of information concerning reasons for use and means of identification, two questions which are of considerable interest in planning documents services. However, for future research on these topics using the methodology employed in the present study, we will need to find some way to capture more effectively data on graduate student and faculty users.

References

[1]"Library Programs Distribution Statistics." Administrative Notes 4 (October 1983).

[2]U.S. Government Printing Office, Superintendent of Documents, Library and Statutory Distribution Services. Depository Library Biennial Questionnaire Statistical Summary for 1981 (Washington, 1983), pp. 7, 12, and 15. Distributed to depositories in microfiche as GP 3.33/2:982.

[3]The percentage of a library's holdings which are depository documents depends, of course, on a number of factors including the size of the library's other collections, the comprehensiveness of the depository and the length of time the library has had depository status. To provide some suggestive figures from the Illinois situation, we estimate that the number of cataloged depository monographs added to the collection in FY82 was about 4 percent of the total volumes added to the collection (including serial volumes). We also estimate that at least 7.4 percent of the Library's total microfiche holdings are depository microfiche. (The actual percentage is probably higher since the figure we used for the estimate is a count of titles, whereas the figure we use for the total collection is a counts of pieces).

[4]See, for example, Hernon's discussion of social scientists' use of federal documents and their indexes in Peter Hernon, Use of Government Publications by Social Scientists (Norwood, N.J.: Ablex, 1979), pp. 65-70.

[5]John V. Richardson, Jr., Dennis C. W. Frisch, and Catherine M. Hall, "Bibliographic Organization of U.S. Federal Depository Collections," Government Publications Review 7A (1980): 476.

[6]Terry L. Weech, "The Use of Government Publications: A Selected Review of the Literature." Government Publications Review 5 (1978): 177-184.

[7]Dawn McCaghy and Gary R. Purcell, "Faculty Use of Government Publications," College and Research Libraries 33 (January 1972): 7-12.

[8]Marilyn H. Wilson, "Faculty Use of Government Publications at Trinity University," Texas Library Journal 49 (May 1973): 76-80.

[9]B. McIlvaine, "University of Connecticut Faculty Use of Government Documents," Connecticut Libraries 17 (1975): 49-51.

[10]Peter Hernon and Sara Lou Williams, "University Faculty and Federal Documents: Use Patterns," Government Publications Review 3 (1976): 93-108.

[11]Weech, p. 181.

[12]Hernon, Use of Government Publications by Social Scientists, p. 24.

[13]Ibid. Note also Hernon's dissertation, "Use and Non-Use of Government Publications by Social Scientists," Ph.D. Dissertation, Indiana University, 1978.

[14]Weech, p. 180, discusses an unpublished master's thesis by Elizabeth Muenscher DeVelbiss, "A Study of the Use of the Subject Card Catalog in Locating Government Documents in the University of California Library," M.S. thesis, University of California, 1956.

[15]Weech, p. 180.

[16]Weech, p. 183-84.

[17]Arlene Schwartz and Janet Lyons Dickinson, unpublished study, (Springfield, Illinois: Illinois State Library, December 1979).

[18]For further details on the establishment of the Illinois Documents Library and its technical practices and procedures, see Paula D. Watson, "Restructuring the Documents Function at a Major Research Library: Implications for Processing and Access," Technical Services Quarterly forthcoming).

[19]William C. Robinson, "Evaluation of the Government Documents Collection: An Introduction and Overview," Government Publications Review 8A (1981): 117.

[20]Robinson, p. 118.

[21]There have been two other reports on documents current awareness services in the literature: Robert Goehlert, "Promoting the Use of Federal Documents: an Experimental Current Awareness Service," Government Publications Review 7A (1980): 27-32 and Marilyn K. Moody and Jean L. Sears, "SDI Service for Government Publications in an Academic Library." Government Publications Review 9 (1982): 55-60. Goehlert does not, strictly speaking, report on the volume of circulation resulting from his service. Moody and Sears attribute circulation of an average of 250 documents per year to their ten-year old SDI service, but they do not relate the number circulated to the number listed. The promotion of documents use through current awareness services assumes particular importance in libraries with centralized, uncataloged depository collections. Based on our very limited experimentation at Illinois we believe that subject-based documents SDI services have an important role to play in increasing faculty use of government publications even at a library in which documents receive the same level of bibliographic control as other materials.

[22]The title search key requires the first four letters of the first significant word of the title and the first five letters of the second significant word of the title. A user looking for a trade book entitled Congregate Housing for Older People enters the command TLS/CONGHOUSI at the LCS terminal and can identify that title plus several other titles on the same topic some of which happen to be documents. Users may decide, even based on the brief record in LCS, that an item which happens to be a document is of sufficient interest to be checked out.

[23]Peter Hernon,. "Functional Documents Collections," Microform Review, 9 (Fall 1980): 209-219.

[24]Elizabeth H. DeVelbiss, "A Study of the Use of the Subject Card Catalog in Locating Government Documents in the University of California Library (Unpublished master's thesis, University of California, Berkeley, 1956).

Appendix I

Summary of the Interaction of the Investigators

The authors each brought a particular perspective and a number of shared philosophies and concerns to the project. Heim had taught the basic documents course at the Graduate School of Library and Information Science at the University of Illinois and had also developed an advanced course in government publications. She had encouraged students in these courses to use the new Documents Library at Illinois as a laboratory for their studies and as a model for their future practice in the field. She had also contributed several articles to the literature of documents librarianship. Watson was responsible for the establishment of the new centralized unit and had been a guest lecturer in Heim's advanced documents course, speaking on bibliographic control for documents and on current issues in documents librarianship. Watson had written on the reorganization of the documents function at the University of Illinois Library and its potential public service impacts. Both authors believed in the centrality of government publications to research collections and in the importance of providing maximum access to these materials.

The PETREL grant allowed the authors to turn theoretical discussions into basic research. Since one of the central principles of organization for the new Documents Library had been the provision of full cataloging for all documents, Watson was interested in determining the extent to which catalog records, both in paper form and online, facilitated access to the collection. Even though the documents cataloging process at Illinois is efficient, because of the large numbers of titles involved, it is expensive in absolute terms. Watson wanted data to justify the

continuing expenditure for cataloging should funding be jeopardized by financial constraints in the Library. She also wanted information on which classes of documents needed cataloging most, in the event that priorities might have to be set. Heim was aware that very little research of any kind has been done on the use of documents in academic libraries by users other than faculty members.

Heim has had considerable experience in questionnaire design and data analysis and was able to suggest a number of refinements to the draft instrument that Watson developed. Based on her understanding of the organization of the documents circulation function, Watson proposed the data collection method. Heim's expectations for the amount of data which could be collected via the questionnaire were reduced as a result of the several meetings the authors had with the Circulation staff. During these discussions it became clear that the already overworked staff could not deal with any but the most simple means for distributing the questionnaire. Since they also could not be expected to explain anything which might be unclear to respondents, the form had to be reduced to the simplest terms. The authors spent considerable time working together to refine the instrument. Both learned something about the limitations of research which requires on-the-spot user response when intermediaries not directly associated with the project must take the initiative in collecting the data.

Watson contributed knowledge of the Library's automated systems and of users' behavior in relation to them and to documents finding tools. She handled negotiations with the LCS programmers concerning the statistical runs produced and set up the specifications which isolated documents call numbers for tabulation purposes from other call numbers

beginning with alphabetic prefixes. Heim was responsible for most of the data analysis and wrote the first draft of the report. Since Heim had left Illinois to become Dean of the School of Library Science at Louisiana State University before the research was completed, the authors had to correspond frequently in order to produce the final report. The authors have been invited to submit an article based on their findings to Government Publications Review. Collaborations which pool the research skills and broad conceptual viewpoint of a library school professor with the operational and in-depth knowledge of a practitioner are likely to produce results which are of both theoretical interest and of practical value in setting priorities for the management of library collections and services. Such joint efforts are rarely reported in the literature and the PETREL grant program provides an excellent opportunity to do productive work of this kind.

U.S. Government Publications User Survey

If you are checking out a U.S. government publication (an item with a call number beginning with DOC.), we would appreciate your cooperation in filling out this questionnaire. The results will help the Library staff to develop more efficient documents service.

1. Status

1) ___faculty 2) ___Ph.D. student
3) ___M.A., M.S. or other type of graduate student
4) ___Undergraduate student: a) ___Lower division b) ___Upper division
(Major: _____)
5) ___Staff: a) ___Academic b) ___Nonacademic
6) ___Permit holder (please specify affiliation if applicable: _____)
7) ___Visiting scholar
8) ___Other (please specify: _____)

2. Department (if applicable) _____

3. Are you checking out (items) for another person (faculty, administrator, etc.)
___Yes ___No

FOR EACH ITEM CHECKED OUT, PLEASE FILL OUT A SET OF QUESTIONS. IF CHECKING OUT MORE THAN 2, ASK CIRCULATION STAFF FOR ADDITIONAL FORM.

(ITEM 1)

1. What is the call number of the document you are checking out?_____

2. How did you discover you wanted to check it out?

1) ___found by asking a librarian for help in identifying information on a particular topic
2) ___told about by another person:
a) ___employer d) ___teacher
b) ___faculty e) ___other, specify _____
c) ___co-worker
3) ___citation in:
a) ___book d) ___dissertation or master's thesis
b) ___journal or magazine article e) ___technical report
c) ___newspaper article
4) ___computerized literature search (please specify system used, e.g., ERIC, MEDLINE): _____
5) ___citation in an index such as Monthly Catalog of U.S. Government publications (please specify name, if known) _____
6) ___library catalog under subject
7) ___browsing the shelves in the stacks
8) ___found while searching LCS for another title
9) ___other source (please specify) _____

3. What is your reason for checking out this item?

1) ___requested by another person (faculty, administrator) for whom I work
2) ___use in a course paper (please specify course):_____ 3) ___Ph.D. thesis
4) ___for graduate thesis (other than Ph.D.)
5) ___use in an original article, report or book
6) ___to develop a course (related to teaching) 7) ___recreation
8) ___other (please specify) _____

If you are willing to participate in a follow-up interview concerning your use of government publications, please fill out the following. If you are working for another person who you think would be willing to be contacted, please fill out his/her name and department.

name_____
department_____
campus address_____
or
home address_____
office phone_____ or home phone_____

-OVER-

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(ITEM 2)

1. What is the call number of the document you are checking out?_____

2. How did you discover you wanted to check it out?

   1) ___found by asking a librarian for help in identifying information on a particular topic
   2) ___told about by another person:
      a) ___employer d) ___teacher
      b) ___faculty e) ___other, specify _____
      c) ___co-worker
   3) ___citation in:
      a) ___book d) ___dissertation or master's thesis
      b) ___journal or magazine article e) ___technical report
      c) ___newspaper article
   4) ___computerized literature search (please specify system used, e.g., ERIC, MEDLINE): _____
   5) ___citation in an index such as Monthly Catalog of U.S. Government publications (please specify name, if known) _____
   6) ___library catalog under subject
   7) ___browsing the shelves in the stacks
   8) ___found while searching LCS for another title
   9) ___other source (please specify) _____

3. What is your reason for checking out this item?

   1) ___requested by another person (faculty, administrator) for whom I work
   2) ___use in a course paper (please specify course):_____ 3) __Ph.D.thesis
   4) ___for graduate thesis (other than Ph.D.)
   5) ___use in an original article, report or book
   6) ___to develop a course (related to teaching) 7) ___recreation
   8) ___other (please specify) _____

Thank you. Please drop off in designated boxes in circulation area or send through campus mail to K. Heim, 410 David Kinley Hall (fold this form in thirds, with address box below toward the outside, and staple). For further information, contact K. Heim (3-2306) or Paula Watson (3-1116).

K. HEIM
410 DAVID KINLEY HALL
CAMPUS

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Appendix III
Codebook

Documents User Survey

Variable	Column(s)	Instructions
ID (ID)	1-3	001-199 Draft II 200-299 Draft I 300-399 Mail 400-499 Microfiche/reference
number USed (NUM)	4	ANP
STATUS (STATUS)	5-6	01 Faculty (FACULTY) 02 Ph.D. (PHD) 03 Other graduate students (OTHGRDS) 04 Undergraduate (non-specified) (GENUNDGRD) 05 Lower Division undergrad (LDUNDGRD) 06 Upper Division undergrad (UDUNDGRD) 07 Staff (non-specified) (NSTAFF) 08 academic staff (ACSTAFF) 09 nonacademic staff (NONACSTAFF) 10 permit holder (PERMIT HLDR) 11 visiting scholar (VSTGSCH) 12 other (OTHER) 99 no response (NORESPONSE)
UNDERGRADUATE Major (UGMAJ)	7-8-9	001 Architecture (ARCH) 004 History (HIST) 010 Speech and Drama (SPEECH) 014 Liberal Arts & Sciences (general) (LAS) 015 Art (ART) 021 Biology (BIOLOGY) 022 Biochemistry (BIOCHEM) 023 Biophysics (BIOPHYS) 031 Accounting (ACCOUNTING) 033 Business Administration (BUSAD) 036 Marketing (MARKETING) 037 Finance (FIN) 045 Nuclear Engineering (NUCENG) 046 Mechanical Engineering (MECHENG) 047 Computer Science (COMPSCI) 048 Bioengineering (BIOENGIN) 051 Chemistry (CHEMISTRY) 065 Law (LAW) 072 Economics (ECONOMICS) 074 Political Science (POLSCI) 076 Social Work (SOCWORK) 079 Geography (GEOGRAPHY) 081 Agriculture (AGRIC) 082 Communications (COMM) 091 Recreation (REC) 095 Interior Design (INTDES) 100 Education (general) (EDUCGEN) 101 Health Education (HEALTHED) 110 Urban Planning (URBPLAN) 111 Industrial Design (INDDES)

Codebook cont.

Variable	Column(s)	Instructions

Codebook cont.

Variable	Column(s)	Instructions
Department Codes (DEPT)	10-11-12	001 Communiation Research Institute (COMRESINST) 002 Psychology (PSYCH) 003 Human Development and Family Ecology (HUMDEV) 004 Health and Safety Education (HEALTHED) 005 Accountancy (ACCOUNT) 006 Illiois State Water Survey (ISWS) 007 Food Sciences (FOODSCI) 008 Labor and Industrial Relations (LIR) 009 Urban Planning (URBPLAN) 010 Landscape Architecture (LANDARCH) 011 Agricultural Engineering (AGRICENG) 012 Education (EDUCATION) 013 Graduate School of Library and Information Science (GSLIS) 014 Geography (GEOGRAPHY) 015 Political Science (PULSCI)
SURROGATE USE (SUR)	13	1 yes 2 no 9 no response (NORESPONSE)
	14-23	ANP
CALL NUMBER OF DOCUMENT (DOC)		
HOW IDENTIFIED (HOWFND)	24-25	01 Asked librarian (ASKDLIBN) 02 Told by unspecified other (TOLDBYOTH) 03 Employer (EMPLOYER) 04 Faculty (FACULTY) 05 Co-worker (COWKR) 07 Other (OTHERP) 08 Citation (unspecified) (UNSPCIT) 09 Book (BKCIT) 10 Journal article (JNLCIT) 11 Newspaper article (NEWSPCIT) 12 Dissertation or masters' thesis (THESISCIT) 13 Technical report (TECHRPTCIT) 14 Computerized literature search (COMPCIT) 15 Citation in index (INDEX) 16 Library catalog under subject (LIBCATSUB) 17 Browsing shelves (BROWSE) 18 While searching LCS for another title (LSCOTH) 19 Other (OTHR) 99 No response (NORESPONSE)

Codebook cont.

Variable	Column(s)	Instructions
REASON FOR USING DOCUMENT (USE)	26-27	01 Requested by another (OTHRQUEST) 02 Course paper (unspecified) (UNSPCRSP) 03 Course paper specified (SPCRSP) 04 Ph.D. thesis (PHDTHESIS) 05 Other graduate thesis (OTHGRDTHESIS) 06 Use in original article, book etc. (ORIGRSCH) 07 To develop a course (DEVCOURSE) 08 Recreation (RECREATION) 09 Other (OTHER) 99 No response (NORESPONSE)
CONTACT INFORMATION (CNTCT)	28	01 listed 02 No response (NORESPONSE)

Appendix IV

LCS Statistical Package Descriptions

Following are descriptions of the LCS statistical reports used in this project: STAT 14, (Titles Within Range By Location) and STAT 18 D (Circulation Activity Within a Range). The explanation of STAT 7 is also included since it provides definitions of the borrower classes used in STAT 18 D and the description of STAT 18 B also follows since it is referred to in the STAT 18 D definitions.

STAT7 (CIRCULATION ACTIVITY DATA)

STAT7 is the LCS circulation statistics report. This report is divided into five sections: charge activity, discharge activity, renewal activity, save activity, and snag activity. The statistics count in each section is subdivided by LCS library location code, and by borrowing priveleges within each LCS library location.

It should be noted at this point that the six patron categories (FCLTY, UNDGD, GRAD, IR&R, SPECL, and INVAL) listed in each section reflect circulation activity by assigned borrowing priveleges and not by patron type. Thus the count under "FCLTY" includes circulation to all patrons who have been assigned faculty borrowing priveleges, and not just circulation to faculty members. For example, some libraries assign faculty borrowing priveleges to non-academic staff members, while some libraries assign undergraduate priveleges to non-academic staff. In the first instance, non-academic staff circulation activity would be counted in the "FCLTY" column, while in the latter instance such activity would be counted under "UNDGD".

Each section of this report consists of nine columns: LIBRARY, LOC. CODE, FCLTY, UNDGD, GRAD, IR&R, SPECL, INVAL, and TOTAL. The significance of each of these columns is as follows:

LIBRARY -- This column contains the names of the libraries to which the circulation activity data applies.

LOC. CODE -- This column lists the three-character LCS library location codes assigned to each library.

FCLTY -- Circulation activity for patrons with faculty borrowing priveleges.

UNDGD -- Circulation activity for patrons with undergraduate borrowing priveleges.

GRAD -- Circulation activity for patrons with graduate borrowing priveleges.

IR&R -- Circulation activity for IR&R borrowing priveleges.

SPECL -- Circulation activity for patrons with special borrowing priveleges. This generally applies to circulation activity to a library's reserve collection.

INVAL -- Circulation activity for patrons with invalid borrowing priveleges. In most cases, this column should show no circulation activity. If circulation activity data should appear in this column, contact the LCS staff at (217) 333-4895.

TOTAL -- Total circulation activity for all patrons within a particular LCS library location.

FREQUENCY

STAT7 is generated on a monthly basis.

STAT14 (TITLES WITHIN RANGE BY LOCATION)

STAT14 consists of a report detailing the number of titles and holdings held by a library within a specified call number range, by LCS library location. The printed report consists of a notation ('RANGE') which indicates the call number range specified, and three columns with the headings 'LOCATION', 'TITLES', and 'HOLDINGS'.

RANGE -- The call number range(s) specified can be as broad or as narrow as the situation dictates. Up to 100 individual ranges may be specified in the same report.

LOCATION -- LCS library location.

TITLES -- Number of LCS records within specified range, within each location.

HOLDINGS -- Number of physical pieces (generally, 'volumes') within range.

FREQUENCY

STAT 14 is generated upon request.

STAT14

TITLES WITHIN RANGE BY LOCATION 05/09/80

RANGE QA - QZ99999999999999999

LOCATION	TITLES	HOLDINGS
ERR	34	34
SER	8	8
STX	3846	4003
STR	54	60
STJ	52	55
STM	12	12
TOTAL	3806	4172

54

Figure 14 -- STAT14

STAT18B (CIRCULATION ACTIVITY BY ITEM)

STAT18B is an analysis of circulation activity by individual item. This report lists individual items which have circulated at least a specified number of times within a specified time period. The report consists of five columns, with headings as follows:

TITLE# -- Lists the title number of the LCS record in question.

VOLUME# -- Lists the volume number assigned to the physical piece in instances where the bibliographic item is subdivided into volumes.

COPY# -- Lists the copy number of the item in question.

CALL# -- Lists the call number of the particular bibliographic record.

CIRCULATION -- Lists the number of times a specific item has circulated. When a request for this report is made, the requestor must specify a minimum number of circulations. The lowest number of circulations that may be specified is 1. The circulation count for an item consists of the number of charges plus the number of renewals, if any, during the specified time period.

FREQUENCY

STAT18B is produced upon request.

STAT18D (CIRCULATION ACTIVITY WITHIN A RANGE)

STAT18D is similar to STAT18B. The differences are that in STAT18D a call number range is specified; the data is presented by LCS library location; circulation activity is broken down by borrowing priveleges; and the individual items are presented in call number order, rather than by title number.

The report indicates the institution to which the data applies, and the specified call number range. The data is divided into eleven columns. "TITLE#" through "CALL#" have the same significance as they do in STAT18B. "FCLTY" through "INVAL" are to be interpreted as they were for STAT7. "TOTAL" has virtually the same significance as does "CIRCULATION" in STAT18B.

FREQUENCY

STAT18D is produced upon request.

STAT18D

CIRCULATION ACTIVITY WITHIN A RANGE

REPORT DATES: 03/01/80 TO 03/31/80

SCHOOL: RANGE: QA TO QZZZZZZZZZ

TITLE #	VOLUME #	COPY #	CALL #	FCLTY	UNGRD	GRAD	IRR	SPECL	INVAL	TOTAL
LOCATION: STX										
57										
10044		001	QA107.B76	0	1	0	0	0	0	1
37430		001	QA139.K52	0	1	0	0	0	0	1
37618		001	QA152.R3	0	1	0	0	0	0	1
22013		001	QA21.G75	0	1	0	0	0	0	1
37400		001	QA248.G69	1	0	0	0	0	0	1
12125		001	QA273.A43	0	1	0	0	0	0	1
3644		001	QA273.E6	0	1	0	0	0	0	1
5066		001	QA303.S2	1	0	0	0	0	0	1
8422		001	QA303.S94	0	1	0	0	0	0	1
37205		001	QA331.S63	1	0	0	0	0	0	1
35197		001	QA331.3H37	0	1	0	0	0	0	1
45437		001	QA331.5456	0	1	0	0	0	0	1
4216		001	QA37.C675	0	2	0	0	0	0	2
37811		001	QA39.E87	0	1	0	0	0	0	1
37810		001	QA39.H344	0	1	0	0	0	0	1
22712		001	QA39.L44	0	1	0	0	0	0	1
22544		001	QA39.2528	1	0	0	0	0	0	1
37092		001	QA445.B74	0	1	0	0	0	0	1
37085		001	QA455.B552	0	1	0	0	0	0	1
8420		001	QA531.F54	0	1	0	0	0	0	1
36934		001	QA531.M26	0	1	0	0	0	0	1
36950		001	QA533.U57	0	1	0	0	0	0	1
36944		001	QA533.W8	0	1	0	0	0	0	1
4588		001	QA551.S56	0	1	0	0	0	0	1
22004		001	QA551.W3	0	1	0	0	0	0	1
36935		001	QA611.J6	1	0	0	0	0	0	1
22584		001	QA76.A68	0	1	0	0	0	0	1
4091		001	QA76.D3	0	1	0	0	0	0	1
40502		001	QA76.D3	0	1	0	0	0	0	1
22581		001	QA76.D52	0	1	0	0	0	0	1
4048		001	QA76.H57	0	1	0	0	0	0	1
6728		001	QA76.L33	0	1	0	0	0	0	1
22578		001	QA76.L5	0	1	0	0	0	0	1
32420		001	QA76.P6525	0	1	0	0	0	0	1
25255		001	QA76.T58	0	1	0	0	0	0	1
22574		001	QA76.W533	0	1	0	2	0	0	1
4748		001	QA76.2556	0	1	0	0	0	0	1
4015		001	QA76.2563	0	1	0	0	0	0	1
4012		001	QA76.5A49	0	2	0	0	0	0	2
3181		001	QA76.58814	0	1	0	0	0	0	1
22568		001	QA76.5C54	0	1	0	0	0	0	1
22408		001	QA76.5D285	0	1	0	0	0	0	1
22406		001	QA76.5F334	0	1	0	0	0	0	1
4008		001	QA76.5G3	0	1	0	0	0	0	1
22401		001	QA76.5M354	0	1	0	0	0	0	1
1957		001	QA76.5L42	0	1	0	0	0	0	1

Figure 18D -- STAT18D